The atd angle for the right hand is 102° and for the left hand 88°, the sum of right and left being 190°. This value is very high, coming above the mean of 162° for Down's syndrome,⁷ yet not so high as the mean of 216° in Patau's syndrome.⁸ Finger prints show an unusually complex pattern of six whorls, three ulnar loops, and one double loop (see Table).

	1	2	3	4	5
Left hand ..	DL	W	W	W	UL
Right hand ..	W	W	UL	W	UL

(W = whorl, UL = ulnar loop, DL = double loop, 1 = thumb)

So far as we are aware, this report is the first to record abnormal dermatoglyphics in a child having the abnormal marker chromosome and typical phenotype of cat-eye syndrome. Previously a child having the marker chromosome was found to have apparently normal dermatoglyphics;⁴ while another with a normal karyotype was found to have abnormal hand dermal patterns similar to those in D-trisomy.⁹ This contradiction is probably due to the effects of cell selection during embryonic growth of mosaics, resulting in the disappearance of cell lines after they had exerted their normalizing or alternatively their teratogenic effect¹⁰ on embryonic growth.

It is desirable to obtain information on the dermatoglyphics and associated chromosome constitution in a larger number of patients with this syndrome to determine whether the present interpretation is correct. We consider it likely that the chromosome anomaly affects the growth pattern of dermal ridges, except in mosaics where there may not be enough abnormal cells in the hands to affect their growth. Further details of the chromosome studies will be published elsewhere.

We wish to thank Dr. Shelagh Calvert for help with the clinical diagnosis, Dr. C. O. Carter for drawing attention to the abnormal dermatoglyphics, Miss Natalie Anderson for cytogenetical technical assistance, Dr. A. P. Norman, consultant in charge of this case, and Dr. John Quinton, referring consultant, Jenny Lind Hospital, Norwich, Norfolk.—We are, etc.,

CARYL W. DARBY
D. T. HUGHES

Institute of Child Health and the Hospital for Sick Children,
London W.C.1

- 1 Haab, O., *Albrecht v. Graefes Archiv für Ophthalmologie*, 1878, 24, 257.
- 2 Schachenmann, G., *et al.*, *Lancet*, 1965, 2, 290.
- 3 Schmid, W., *Journal de Génétique Humaine*, 1967, 16, 89.
- 4 Weber, F. M., Dooley, R. R., and Sparkes, R. S., *Journal of Pediatrics*, 1970, 76, 594.
- 5 Gerald, P. S., Davis, C., Say, B. M., and Wilkins, J. L., *Pediatric Research*, 1968, 2, 297.
- 6 Mulvihill, J. J., and Smith, D. W., *Journal of Pediatrics*, 1969, 75, 579.
- 7 Penrose, L. S., *Annals of Human Genetics*, 1954, 19, 10.
- 8 Penrose, L. S., *Nature*, 1963, 197, 933.
- 9 Neu, R. L., Assemany, S. R., and Gardner, L. I., *Lancet*, 1970, 1, 949.
- 10 Neu, R. L., Bargman, G. J., and Gardner, L. I., *Pediatrics*, 1969, 43, 624.

Ampicillin and Mononucleosis

SIR,—It is now well known that the great majority of patients suffering from infectious mononucleosis who are given ampicillin develop a sensitivity rash. Dr. T. Pastor (24 April, p. 222) asks the very pertinent question, is this allergy permanent? The

answer would seem to be that it is not. We have been investigating this for some time by giving graduated doses of ampicillin to patients some months after their ampicillin reaction during their attack of infectious mononucleosis. No rash or other evidence of hypersensitivity has developed in the first ten patients who have received a full therapeutic dose. These preliminary results would suggest that such patients can safely be given ampicillin six months after a reaction to this drug during an attack of infectious mononucleosis.

The investigation is continuing and will be reported in detail in due course. It may well be that the altered hypersensitivity which occurs in mononucleosis may disappear much more rapidly than six months. —I am, etc.,

I. J. NAZARETH

St. Ann's General Hospital,
London N.15

Pulmonary Gas Exchange during Dialysis

SIR,—We were interested in the article "Pulmonary Gas Exchange during Peritoneal Dialysis" by Dr. M. J. Goggin and Dr. A. M. Joeke (1 May, p. 247).

We should like to suggest an explanation for the changes in arterial oxygen tension (PaO_2) which would account for the fact that these changes were related to the volume of peritoneal dialysate and also for their rapid reversibility. It has recently been suggested in elderly patients that airways in the dependent parts of the lung may close at a volume ("closing volume") greater than residual volume. "Closing volume" increases with age so that above the age of 44 in supine subjects and 65 in seated ones "closing volume" may exceed functional residual capacity (F.R.C.) and airway closure occurs during ordinary tidal breathing.¹ It has also been shown that on going from the erect to the supine posture "closing volume" is unaltered but F.R.C. falls, and that if it falls below "closing volume" PaO_2 will fall.²

We presume that the patients described by Dr. Goggin and Dr. Joeke were recumbent or semi-recumbent during dialysis, and we suggest that the addition of 1-2 litres of fluid to the abdominal contents produced a corresponding fall in F.R.C., which dropped below "closing volume."

In the majority of patients with peritoneal dialysis who are being treated, fluid retention is present at the start of the dialysis. As the "closing volume" can be increased by interstitial oedema in the lungs, this would have accentuated the effects of any fall in F.R.C. Incidentally, the blood gas data in the fourth line of Table IV are impossible, as arterial PO_2 cannot exceed alveolar PO_2 .—We are, etc.,

S. FREEDMAN
D. J. MABERLEY

Department of Medicine,
Royal Postgraduate Medical School,
London W.12

- 1 Leblanc, P., Ruff, F., and Milic-Emili, J., *Journal of Applied Physiology*, 28, 448.
- 2 Craig, D. B., Wahba, W. M., Don, H. F., Couture, J. G., and Becklake, M. R., *Clinical Research*, 1970, 18, 742.

**We have shown this letter to Drs. Goggin and Joeke who reply: "We find the comments of Dr. S. Freedman and Dr. D. J. Maberley of considerable interest. The patients, who were recumbent or semi-

recumbent during dialysis, had no evidence of pulmonary disease demonstrable clinically or radiologically. None had anything but minor fluid overload and the majority had been under careful metabolic management for enough time to have avoided this.

"As they rightly say, the figures of the derived data in the fourth line of Table IV are impossible and should read 142→137." —ED., B.M.J.

Dental Discolouration and Tetracycline

SIR,—The continued widespread practice of prescribing the conventional tetracycline group of drugs to children, despite repeated warnings of its tendency to produce disfiguring discolouration of both primary and secondary dentition, has now become a serious abuse in an age in which there are a host of effective antibiotics for the treatment of specific infections.

I have recently had the misfortune to see a perfectly well child aged 10 years with gross discolouration of her secondary dentition as a result of repeated doses of tetracycline for trivial respiratory infections. There seems no justification for the continued administration of tetracycline under the age of 6 years. —I am, etc.,

L. S. TAITZ

Department of Child Health,
University of Sheffield,
Yorks

Cure of Lung Cancer after Incomplete Surgical Resection

SIR,—In his description of three patients with lung cancer apparently cured following incomplete surgical resection Mr. R. Abbey Smith (5 June, p. 563) suggests that this phenomenon occurs only where the residual cancer remains on the wall of the left atrial chamber of the heart, but not when residual cancer remains on some other intrathoracic organ. That cure is also possible in the latter circumstance is illustrated by the following case.

The patient, then aged 50, was first seen on 13 November 1957. He worked as a chimney sweep for one year, previously as a gardener. He had not been exposed to any known industrial hazard, but had regularly smoked 20 cigarettes daily. There was no family history of cancer in primary relatives. There was no previous history of allergy or abnormal endocrine activity. His blood group was AB, Rh. positive. His complaint was of troublesome cough for two months, and chest pains, undue dyspnoea, and slight haemoptysis for two weeks. Chest radiograph showed a mass at the left hilum, with partial collapse of the left upper lobe. Bronchoscopy on 21 November showed the carina normal, but an area of abnormal mucosa at the left upper lobe orifice, which was distorted and bled easily. The bronchial biopsy showed an undifferentiated oat cell carcinoma. He was considered to be operable by left pneumonectomy.

At operation by Mr. Richard Rowlandson on 27 November it was only when the left main bronchus was clamped that it was found to have gone through growth in the bronchial wall. It was then too late to retreat, and the operation was proceeded with, though it was realized that growth was being cut through and that complete removal of the cancer would not be possible. The pneumonectomy specimen showed a growth 3 cm x 2 cm very close to the left main bronchus obstructing the bronchus of the left upper lobe and also invading the bronchus of the left lower lobe. Several large